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Qualitative vs. Quantitative Standards.*

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Introduction.

One of the most extraordinary situations, which any teacher has to meet, is the remarkable variability in the capacities of individual students. Thorndike has shown by actual experimentation that a high-grade student is able to do from two to five times as much work in a given period of time as one not so fortunately gifted. On the other hand, the variability as to quality is just as marked. There are students at the end of the first year of German, for example, who are better prepared than some poorer students in the middle of the second year. The exhibits presented here to-day are further tangible evidence of how wide this variability actually is. These statements are so obvious that they hardly need repetition except as a basis of departure for a further discussion of what we are to do with this problem.

Up to ten or fifteen years ago, there was practically no tangible evidence in educational circles in the way of an attempt to solve this difficulty. Even to-day schools, in general, are organized on a quantitative basis. So many minutes for so many days a week, for so many weeks a year mean one unit of credit toward graduation. No distinction is made as to the very best students, none as to the poorer students. Classes are administered as if they were average classes, when we know that no such thing exists in actuality. To make the matter specific, let us ask two questions:

1. Is it not possible to save time for the most gifted students by requiring a higher grade of training of them; or on the other hand, by advancing them more rapidly, put them in contact with other fields of training sooner than under present conditions?
2. Is it not possible to encourage the poorer students by requiring a smaller minimum of work, whose quality shall be as high within limits as that of the best students, but which would take a longer time to perform?

For in these two questions lies the criticism of education as at present administered: we do not train high-quality brains on the one hand and, on the other, we apply standards too high for the poorest students, discourage them, and throw them into society, not equipped to do the work which society has the right to expect.

* Paper, delivered before the German section of the Educational Conference of Academies and High Schools with the University of Chicago, April 14, 1916.

The school is here to produce brains better adapted to social functions. Hitherto the school has been constantly under fire of criticism. We are told that the school doesn't make students efficient. Students enter the world unable to do anything really well. To allay that criticism we have reorganized curricula until we are dizzy, wondering what will come next. But all the reorganizations of curricula cannot avail if they imply merely so many additions to the list of school courses. They will act as just so many more agencies for wasting the time of the best students and discouraging the poorest. What we have not yet done is to give sufficient attention to reorganizing the courses we have, on the basis of variability in the capacity of individual students and in the direction of high-quality work. That is infinitely more important. Relatively it does not matter so much whether students take German or Latin as it does whether or not the best student is producing to the limit of his capacity or the poorest student is doing what he does highly efficiently, even if in amount it is considerably less than his more gifted comrade. Education concerns itself with the production of habits. But one of the most important habits—namely to work up to one's ultimate capacity whether the student is a high-grade student or a very poor one—this habit is obscured at present by a quantitative system. The production of high-quality work and some scheme of class readjustment, based on the principle of variability in students' capacities, are inseparably linked.

Methods in Operation.

Before we analyze the application of these principles to our particular field of German, and discuss what remedies are and may be applied, let us describe, first of all, the schemes already in operation which are based upon the variability of students' capacities and which attempt to solve this very difficult problem.

In his very excellent book, "The Methods of Teaching in High Schools,"* Prof. Parker, of the School of Education in this university, summarizes, under four heads, experimental attempts which do away with class instruction as we know it, and which are based upon the differences in the ability of individual students.

1. The first scheme abolishes all class instruction and reverts to the individual method (which was the school method practiced down even into modern times). This scheme Parker terms the Pueblo plan because it was tried out extensively in the Pueblo, Colorado schools. Home work was abolished entirely. The recitations in turn became study periods. Each pupil was advanced as rapidly as he mastered the assignments. Superintendent P. W. Search cites the example that, in a class of Caesar, the very brightest student covered 140 chapters, the very poorest only

* Ginn, 1915.

45. As a whole, the record in all classes indicated that the very best student did about three and one-half times as much as the poorest and twice as much as the median. The best pupils had no other limits to the amount of work done than their own capacities. The poorer students, on the other hand, were not forcibly dragged over material faster than they could master it. The difficulty with the plan is that it taxes the ingenuity of the teacher who has large classes. It also eliminates the training in expression on the part of the students and the training which lies in the group recitation.

2. A second scheme divides the class into three homogeneous groups, the brightest, average, and poorest students respectively. Each group has its own captain or monitor. Each occupies a corner of a room and proceeds at its own speed, and, under a teacher with good discipline, without disturbance. Home study in this scheme is not abolished. The sections meet as so many classes and hear their recitations as usually administered. Often, however, the period is used for common study to solve new problems and exercises. The advantages of the scheme are (a) that students of equal capacity work together, and (b) that a student recites oftener. Mr. Parker gives the example of a Geometry class in his own high school days. The brightest section always completed plane and solid geometry in one year, the second section the plane geometry alone, and the poorest section only four of the five books, but did its work more thoroly than if it had been obliged to cover the five books. Needless to say, it requires a highly skilful teacher to control three such groups. It may not be adaptable to all kinds of subject matter. And an experiment, mentioned by Schorling,* tends to indicate the inadvisability of the monitorial system. Objective tests indicated that after a while the poorer students weakened under such a system and the monitor himself lost in interest and efficiency.

3. A third scheme differs from the foregoing in that it keeps the class intact as under present conditions. It scales down the minimum requirement and insists that all students, even the poorer ones, get that minimum. For the brighter students, however, *standardized supplementary work* is assigned for further work at their desks, in the laboratory, or in the library. It excuses the brightest students from *such* recitations, for example, which the instructor would consider in view of their already proven mastery of the material under discussion so much wasted time for them. It encourages personal initiative to do more intensive or extensive work in a given field. Since this scheme is most adaptable to our own field of German, I shall analyze it in some greater detail a bit later on in this discussion.

* Schorling, Raleigh: The Problem of Individual Differences in the Teaching of Secondary School Mathematics. School Review, Vol. XXIII, No. 10.

4. The fourth scheme which Parker enumerates is called the Batavia scheme. Its specific characteristic is supervised study. In its adaptations, the period is either doubled, one being utilized for recitations, the other for supervision of students' study by the teacher, or the original period is so subdivided. The class progresses as an entity but individual differences are taken into account in that the period for supervised study lends itself admirably to careful analysis of the poorest students' needs and to supplementary tasks for the brightest students who can do their work more quickly. Incidentally it also gives the teacher the best possible indication of how long his or her assignments actually are. With this last scheme, Parker suggests combinations of various kinds, e. g., with the three-section monitorial system and with the scheme which lowers the minimum requirements.

Such, then, is a very brief resumé of what already has been done in the way of differentiating students according to their capacities and abilities. We note that the general characteristics of these schemes are to make a student work up to his highest capacity. Now, however, let us see what further developments have been made which look to *rewarding high-quality work by means of proportionately high quantity of credit*, since that is an immediate outgrowth of this problem. As long as our standards are expressed in terms of quantitative units, so long will that type of reward be the best means of stimulating our students to their best efforts.

1. Several years ago, the faculty of our own University High School discussed the advisability of differentiating students' grades by means of awarding to the various grades a certain quantitative credit. At that time, grading schemes, then in existence in the University of Missouri and the Decatur High School*, were analyzed and a scheme evolved which rewards the highest grade students with a proportionately greater amount of credit and penalizes the poorest students by giving a less amount. In other words, it proposes to apply the theory of motivation in such a way that a student will *want* to do better work because it means more credit. As students' grades are administered usually, there is no distinction in the *amount* of credit for the very best students and the very poorest students who barely pass the course. According to the University High School scheme, this is not the case. A student who receives an "A+" grade, i. e. 95, receives *ipso facto* 1.25 units where he formerly obtained only one unit. The "A" grade (90) receives 1.2 units, the "B+" grade (85) receives 1.15 units, the "B" grade (80) receives 1.1 units, the "C+" grade (75) receives one unit, the "C" (70) receives .95 unit, the "D+" grade (65) receives but .9 unit, and the "D" grade

* Since that time quite a number of other institutions have adopted the plan.

(60), the lowest passing grade, receives only .85 unit. Those below 60 receive no credit at all.

Right here would doubtless be suggested that the "A" grade should have the unit credit and the others be scaled down in proportion. However, the committee at that time unanimously adopted the plan of "encouragement" rather than the opposite. The resulting improvement of the standard in the quality of the work of the students in the high school in the four years of the operation of this scheme is striking evidence of its value. It should be said too, that in this case the teacher tends to become even more severe in grading. An "A+" grade means no longer one unit, it means 1.25 units. The question naturally presents itself, not whether the student is an "A+" grade student, but whether he is .25 of a unit advanced above his "C+" classmate. I make a point of this because in spite of this naturally more severe grading, the results in the high school have been singularly higher.

Mr. Johnson, Principal of the University High School indicates the results of the scheme in the following manner:

"Varying credit has been given in the University High School for four years. In this time no pupil has, by reason of this method, been graduated in three years. Several have secured as many as 20 units in four years. It is easy to draw conclusions which have not been subjected to scientific testing. It is certainly true that good scholarship is in higher esteem among the pupils of the school. Rewards open to all on even terms place distinctions for scholarship on a much higher social plane than has generally prevailed where such rewards have been few, often artificial, and not infrequently open to question, by pupils and teachers, as to whether they have fallen where deserved." *

The scheme in actual practice works out something like this. An "A+" grade student who pursues four studies for *three* years obtains 15 units credit (as against the former 12), or almost enough to graduate. The "A" grade 14.4, the "B+" 13.8 etc. This university, however, which has now shown its willingness to accept the high school scheme of credits with, to be sure, a few formal restrictions, suggests that the student remain in the high school the entire four years. In that time the "A+" student will have obtained 20 units, the "A" student 19.2 units, the "B+" student 18.4 etc. In other words, he will receive, on entrance to the university, advance credit of a kind which will shorten his work toward the baccalaureate degree. The very poor student, however, is penalized. At the end of *four* years, a "C" grade student, pursuing four courses, obtains 15.2 units, a "D+" grade student 14.4 units, and a "D" grade student, obtains 13.6 units (as against the previous 16.) According to the new scheme, the "A+" grade student obtains in three years more units of credit than the "D" student in four.

* *School Review*, Vol. XXIII, No. 10, pp. 715-719.

2. Again. Our classes are largely made up of representatives from Freshman to Senior Classes. Shall we give the Senior, who has had the advantage of additional training, the same credit in beginning German, for example, as his Freshman classmate, who has just come from the elementary school? To make the point specific, The University of Chicago found that until recently seniors were taking elementary German, French, and other elementary courses along with freshmen. So a scheme was adopted which gives a freshman or a sophomore still full credit for such beginning subjects, juniors, however, only one-half and seniors none at all. I think this is pretty severe, but it does one thing: it gets more elementary subjects out of the way in the beginning and it makes classes more uniform as regards their constituents. What shall we do in the high school? The North Central Association, for example, recommends that advanced students "should carry on a larger quantity of work at a higher level" than the first and second year students in these classes. It certainly is a question of some moment. In any event it should not be as severe as the above scheme, now in operation in our university classes.

3. Another scheme which looks to rewarding high-quality work with proportionately more credit has been adopted by the French Department of this University. At the end of the first quarter, all "A" grade students are put into one section — called the "flying section." At the end of the third quarter these students receive four majors credit (instead of the three majors, received by those who remained in their original sections). The department is enthusiastic about the results. The original sections all use the same text and cover the same ground. And as far as the best students are concerned, it works admirably. They are able to adapt themselves to a new teacher very quickly. But not so with the poorer students. Some of them are obliged — since the number of sections remains the same — to go to another instructor in the second quarter. That difficulty would be obviated the moment the original sections remained intact except for the best students. For the best students an additional section should be provided, over and above the original sections.

The Bearing on the Teaching of German.

Now what bearing has all this general discussion on the teaching of German? What can we do to apply these general principles to our teaching?

This conference is dedicated to raising the standard of teaching German. For the past several years we have confined ourselves to the questions of what should go into the course of study. Our syllabus, adopted three years ago, states in a definite way what ground we may

expect to cover in the first, second, and third year of the high school course. If we compare that course of study with other courses of study, we are struck by its modest requirements. It is a significant fact, too, that in adopting our syllabus in its revised form a year ago, we accepted an even smaller minimum than in its original form several years previous. All of which indicates that we have attempted to raise the quality of our work by reducing the quantity of reading matter, composition, and grammatical elements. And none of us, who has tried out what the syllabus proposes, is in any doubt as to its value. Reducing quantity gives us more time to hammer away at the essentials, without which a student can not go far in language study.

But the syllabus which proposes these reductions is only one phase of the question. It does not answer how we are to help the very best nor the very poorest students. Under such a reduction of the course to its essentials the poorer students, to be sure, profit most. But the best students are likely to be wasting their time in the slow process.

1. Let us discuss first then, what we can do for the very best students.

Administrative difficulties doubtless prevent our trying out the schemes analyzed above. But one of them can be utilized to excellent results with somewhat smaller classes than the rule. I refer now to the scheme which scales down the minimum requirement and provides supplementary work for the more capable students, something that will either intensify or extend their interest in the particular work in hand.

One of the things which we can utilize in our work is supplementary reading and that from the very first year on. We must be warned on two points, however. First, we must very carefully select the material, as to subject matter and difficulty of structure and vocabulary. Promiscuous supplementary reading without careful grading and choosing, can do more harm than good. Moreover such a scheme, as that advanced by Prof. Kengott of the St. Louis schools* in this conference a year ago, —namely where all students are obliged to read— seems to me unpedagogical. Supplementary reading should be utilized for two things, (a) it should serve as a basis of interest in the future work for the better students, (b) it should be used as a privilege which only *those* may have, who have done excellent work. As such it *stimulates thorough interest in class work* which must remain the first and biggest job before the student. To have every student read, is to put on the poorer students just one more additional burden which can only have the result of weakening even more the quality of their class work. If we do this

* Now at the State Normal School, La Crosse, Wis.

type of work, let us be guided by lists, prepared by those who already have done much work of this character.*

In the University High School of Chicago, the German department has utilized this outside reading experimentally also in class. The "A" grade students were seated in the rear. As soon as the instructor was satisfied that the principle under discussion could be applied by these students, they were excused from further recitation, while the rest of the class underwent further drill for the rest of the period. This seems to me one of the most admirable adaptations, but let it be understood again *in very small classes*. Such work must be carefully planned and carried out to function properly.

(To be concluded.)

Berichte und Notizen.

I. Sektionsversammlungen der Lehrer moderner Fremdsprachen.

I.

Die *Association of Modern Language Teachers of the Central West and South* tagte den 20. und 21. April zu Indianapolis, im Deutschen Hause. Zugewogen waren, jedenfalls infolge der Zeitereignisse, bedeutend weniger als im Vorjahre, aber immerhin zwischen hundert und hundertfünfzig Personen, darunter die Vertreter des Deutschen in grosser Mehrzahl.

Freitag abend, 8 Uhr, fand ein einfaches Festessen im Speisesaal des Deutschen Hauses statt. Darauf folgte die vorzügliche Rede des abgehenden Präsidenten, Prof. A. G. Canfield, Michigan, über „Voltaire und die moderne Bildung“.

Bei der nachfolgenden Geschäftssitzung herrschte infolge der erfreulichen Bericht des Geschäftsführers des *Journal*, Prof. A. Busse, Hunter College, und des Unterzeichneten als Sekretär-Schatzmeisters eine gehobene Stimmung. Das *Journal* wird beim Jahresschluss einen bedeutenden Überschuss zu verzeichnen haben. Auch hat die stets wachsende Abonnentenzahl das zweite Tausend schon bedeutend überstiegen!

Unser Verband, kurz als *M. L. T.* bezeichnet, hat ebenfalls einen ganz phänomenalen Aufschwung zu verzeichnen. Erst vor fünfzehn Monaten gegründet, zählt er heute schon über siebenhundertundfünfzig Mitglieder, und es haben sich ihm schon acht verschiedene Zweigverbände angeschlossen.

Das Programm, welches Samstag morgen, 9½ Uhr, im kleinen Auditorium des Deutschen Hauses fortgesetzt wurde, war äusserst reichhaltig und gediegen. Prof. R. Clyde Fond las über Aussprache im französischen Unterricht und betonte den Wert des guten Lesens seitens des Lehrers und der Schüler. Über dasselbe Thema las, kurz, nachmittags auch Prof. A. Coleman-Chicago, betonte aber mehr die technisch-phonetische Seite.

* Cf. List prepared by Prof. A. Kennigott in "Monatshefte," Vol. XVII, No. 3, pp. 89-97; also Miss L. M. Schmidt's contribution to "A List of Books Suited to a High School Library," Bureau of Education, Washington, D. C., 1913, Bulletin No. 35, Whole No. 535.